updated search LVCook 1/7/03

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     (FILE 'HOME' ENTERED AT 15:36:22 ON 07 JAN 2004)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
     15:36:47 ON 07 JAN 2004
L1         13137 S PHOSPHORYLCHOLINE?
L2           618 S L1 AND (C REACTIVE PROTEIN)
L3           168 S L2 AND ANTIBOD?
L4            73 DUPLICATE REMOVE L3 (95 DUPLICATES REMOVED)
L5           323 S ANTI-CRP
L6             4 S L5 AND L4
L7            52 S (LABELED PHOSPHORYLCHOLINE)
L8            31 DUPLICATE REMOVE L7 (21 DUPLICATES REMOVED)
L9             1 S L8 AND CRP?
L10            4 S L8 AND (C REACTIVE PROTEIN)
L11            4 DUPLICATE REMOVE L10 (0 DUPLICATES REMOVED)

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     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
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L11            4 DUPLICATE REMOVE L10 (0 DUPLICATES REMOVED)

=>
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L9 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1981:225191 BIOSIS
DN PREV198172010175; BA72:10175
TI LIMULIN A C REACTIVE PROTEIN FROM LIMULUS-POLYPHEMUS.
AU ROBEY F A [Reprint author]; LIU T-Y
CS DIV BIOCHEM BIOPHYS, BUR BIOL, FOOD DRUG ADM, BETHESDA, MD 20205, USA
SO Journal of Biological Chemistry, (1981) Vol. 256, No. 2, pp. 969-975.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
FS BA
LA ENGLISH
AB A protein which binds specifically to the phosphorylcholine residues of a phosphorylcholine affinity column in the presence of Ca2+ was isolated from the hemolymph of the horseshoe crab L. polyphemus. Immunological cross-reactivity of the phosphorylcholine-binding protein with limulin, a sialic acid-specific lectin in the hemolymph prepared by a different method, was shown by the formation of a single line of identity on immunodiffusions plates using antisera prepared against the phosphorylcholine-binding protein. The Limulus C-reactive protein (**CRP**) isolated by the phosphorylcholine affinity column precipitates with the pneumococcus C-polysaccharide and with a synthetic bovine serum albumin derivative to which phosphorylcholine is covalently attached. Precipitation is inhibited by EDTA or by phosphorylcholine. This protein also agglutinates horse red blood cells and shows weak cross-reactivity with sheep antisera prepared against rabbit C-reactive protein. The hemolymph hemagglutination titer is markedly decreased by pretreatment of the hemolymph with antisera prepared against the Limulus phosphorylcholine-binding protein. Phosphorylocholine does not inhibit the hemagglutination by whole hemolymph or by Limulus phosphorylcholine-binding protein but a protein containing sialic acid oligosaccharides does inhibit the hemagglutination. ESR experiments using a spin label which resembles phosphorylcholine shows binding of the spin label to the protein only in the presence of Ca2+. Mg2+ cannot substitute for Ca2+ in supporting the binding of spin-**labeled phosphorylcholine** to limulin. The spin label can be disassociated from the protein by EDTA or competitively removed by phosphorylcholine but not by PO4-2 or by choline. The relationship of limulin to the C-reactive proteins of rabbit and man is discussed.
CC Cytology - Animal 02506
Radiation biology - Radiation and isotope techniques 06504
Ecology: environmental biology - Water research and fishery biology 07517
Comparative biochemistry 10010
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Minerals 10069
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Blood - Other body fluids 15010
Physiology and biochemistry of bacteria 31000
Immunology - General and methods 34502
Invertebrata: comparative, experimental morphology, physiology and pathology - Arthropoda: chelicerata 64060
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis); Physiology
IT Miscellaneous Descriptors
RABBIT SHEEP HUMAN HORSESHOE-CRAB BOVINE SERUM ALBUMIN HORSE

ERYTHROCYTE AGGLUTINATION PHOSPHORYL CHOLINE AFFINITY SIALIC-ACID SPECIFIC LECTIN PNEUMOCOCCUS C POLY PEPTIDE HEMOLYMPH CALCIUM IONS

ORGN Classifier
Gram-Positive Cocci 07700
Super Taxa
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms

ORGN Classifier
Merostomata 75404
Super Taxa
Chelicerata; Arthropoda; Invertebrata; Animalia
Taxa Notes
Animals, Arthropods, Chelicerates, Invertebrates

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Leporidae 86040
Super Taxa
Lagomorpha; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Lagomorphs, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Equidae 86145
Super Taxa
Perissodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Perissodactyls, Vertebrates

RN 107-73-3 (PHOSPHORYLCHOLINE)
14127-61-8 (CALCIUM IONS)

L9 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1981:225191 BIOSIS
DN PREV198172010175; BA72:10175
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AU ROBEY F A [Reprint author]; LIU T-Y
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IT Miscellaneous Descriptors
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Taxa Notes
Animals, Arthropods, Chelicerates, Invertebrates

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
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Super Taxa
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Super Taxa
Perissodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Perissodactyls, Vertebrates

RN 107-73-3 (PHOSPHORYLCHOLINE)
14127-61-8 (CALCIUM IONS)

L6 ANSWER 3 OF 4 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 91137827 EMBASE
DN 1991137827
TI **C-reactive protein** in patients with lymphatic filariasis: Increased expression on lymphocytes in chronic lymphatic obstruction.
AU Lal R.B.; Dhawan R.R.; Ramzy R.M.; Farris R.M.; Gad A.A.
CS Centers for Disease Control, Mail Stop G19, Atlanta, GA 30333, United States
SO Journal of Clinical Immunology, (1991) 11/1 (46-53).
ISSN: 0271-9142 CODEN: JCIMDO
CY United States
DT Journal; Article
FS 004 Microbiology
026 Immunology, Serology and Transplantation
LA English
SL English
AB Levels of **C-reactive protein** (CRP) were evaluated by enzyme immunoassay in patients infected with the filarial parasite Wuchereria bancrofti. Significantly elevated levels of CRP ($P < 0.001$) were demonstrated in patients with chronic lymphatic pathology (CP; $n = 18$) compared to patients wity asymptomatic microfilaremia (MF; $n = 13$) and normal volunteers (NV; $n = 29$). Serum levels of CRP showed an inverse correlation ($r(s) = -0.37$; $P < 0.05$) with phosphocholine (PC)-containing filarial antigen that was present in the circulation of patients with bancroftian filariasis. Marked elevations in the percentage of CRP-binding lymphocytes were observed in patients with CP (mean = 44%; $P < 0.001$) compared to those with MF (mean = 18%) or NV (mean = 3%). The increased percentage of surface CPR was not due to an abnormal change in major lymphocyte subset (CD5, CD4, CD8, or CD19). No significant correlation was noted between surface CRP and serum CRP; however, an inverse correlation was observed between surface CRP and PC-bearing circulating filarial Ag ($r(s) = -0.64$; $P < 0.001$). Biosynthetic labeling and immunoprecipitation with **anti-CRP antibodies** indicated quantitative differences in the synthesis of CRP in patients with CP compared to MF and CP. Complexing of CRP with PC-containing Brugia malayi antigen (CRP-BmA) caused increased binding to normal lymphocytes (<8%), but not close to the extent seen in patients with CP (44%), suggesting de novo synthesis of CRP in these patients. Thus, the CRP-binding lymphocytes may represent a marker of immunologically committed cells in chronic lymphatic obstruction and may play a role in the pathogenesis of this disease.
CT Medical Descriptors:
*filariasis
*lymphocyte
adolescent
adult
article
clinical article
controlled study
female
human
human cell
male
priority journal
serum
Drug Descriptors:
***c reactive protein: EC, endogenous compound**
***phosphorylcholine: EC, endogenous compound**
RN (**c reactive protein**) 9007-41-4; (**phosphorylcholine**) 107-73-3

L6 ANSWER 3 OF 4 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 91137827 EMBASE
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026 Immunology, Serology and Transplantation
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CT Medical Descriptors:
*filariasis
*lymphocyte
adolescent
adult
article
clinical article
controlled study
female
human
human cell
male
priority journal
serum
Drug Descriptors:
***c reactive protein: EC, endogenous compound**
***phosphorylcholine: EC, endogenous compound**
RN (**c reactive protein**) 9007-41-4; (**phosphorylcholine**) 107-73-3

L11 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1984:175424 BIOSIS
DN PREV198477008408; BA77:8408
TI SYNTHESIS AND USE OF NEW SPIN LABELED DERIVATIVES OF PHOSPHORYL CHOLINE IN A COMPARATIVE STUDY OF HUMAN DOGFISH MUSTELUS-CANIS AND LIMULUS-POLYPHEMUS **C REACTIVE PROTEINS**.
AU ROBEY F A [Reprint author]; LIU T-Y
CS DIVISION OF BIOCHEMISTRY AND BIOPHYSICS, OFFICE OF BIOLOGICS, NATIONAL CENTER FOR DRUGS AND BIOLOGICS FOOD AND DRUG ADMINISTRATION, BETHESDA, MARYLAND 20205, USA
SO Journal of Biological Chemistry, (1983) Vol. 258, No. 6, pp. 3895-3900. CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
FS BA
LA ENGLISH
AB New spin labeled derivatives of phosphorylcholine were synthesized. The compounds cause reversible inhibition of the precipitation reactions between pneumococcal C-polysaccharide and the **C-reactive proteins** from humans, dogfish sharks (Mustelus canis) and horseshoe crabs (Limulus polyphemus). The spin **labeled phosphorylcholine** derivatives also rival phosphorylcholine as a ligand for the human, dogfish and Limulus **C-reactive proteins**. The interactions of the purified **C-reactive proteins** with the spin labeled derivatives of phosphorylcholine were studied using ESR spectrometry. The dramatic decrease in the ESR signal of some of the spin labels is due to immobilization of the label. Only the well known phosphate spin label, 4-phosphate-2,2,6,6-tetramethyl-piperidine-1-oxyl could be used for binding studies on human and Limulus **C-reactive proteins**. Thus, by Scatchard analysis, the human **C-reactive protein** bound 1 mol of phosphate spin label per mol of protein with a Ka = 3.91 .times. 103 M-1; the Limulus **C-reactive protein** bound only 0.5 mol of phosphate spin label per mol of protein with an overall Ka = 1.95 .times. 103 M-1. Inhibition studies using purified C-polysaccharide-induced inhibition of the phosphate spin label-human **C-reactive protein** interaction showed competitive inhibition with a KI of 4.78 .times. 10-5 M at 18.degree. C. The phosphate spin label did not bind to dogfish **C-reactive protein**. One new phosphorylcholine spin label did bind and was used for Scatchard and Hill plot analyses. The dogfish **C-reactive protein**, which exists as a MW = 50,000 dimer, bound 2 mol of the phosphorylcholine spin label per mol of protein, and this binding exhibited negative cooperativity as indicated by a Hill coefficient of 0.75.
CC Ecology: environmental biology - Water research and fishery biology 07517
Comparative biochemistry 10010
Biochemistry methods - Lipids 10056
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biophysics - Methods and techniques 10504
Biophysics - Membrane phenomena 10508
External effects - Temperature as a primary variable 10614
Pathology - Inflammation and inflammatory disease 12508
Blood - Blood and lymph studies 15002
Temperature - General measurement and methods 23001
Invertebrata: comparative, experimental morphology, physiology and pathology - Arthropoda: chelicerata 64060
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Pathology; Physiology

IT Miscellaneous Descriptors
ESR
ORGN Classifier
Merostomata 75404
Super Taxa
Chelicerata; Arthropoda; Invertebrata; Animalia
Taxa Notes
Animals, Arthropods, Chelicerates, Invertebrates
ORGN Classifier
Chondrichthyes 85202
Super Taxa
Pisces; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Fish, Nonhuman Vertebrates, Vertebrates
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 107-73-3D (PHOSPHORYLCHOLINE)

L11 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1984:175424 BIOSIS
DN PREV198477008408; BA77:8408
TI SYNTHESIS AND USE OF NEW SPIN LABELED DERIVATIVES OF PHOSPHORYL CHOLINE IN A COMPARATIVE STUDY OF HUMAN DOGFISH MUSTELUS-CANIS AND LIMULUS-POLYPHEMUS **C REACTIVE PROTEINS**.
AU ROBEY F A [Reprint author]; LIU T-Y
CS DIVISION OF BIOCHEMISTRY AND BIOPHYSICS, OFFICE OF BIOLOGICS, NATIONAL CENTER FOR DRUGS AND BIOLOGICS FOOD AND DRUG ADMINISTRATION, BETHESDA, MARYLAND 20205, USA
SO Journal of Biological Chemistry, (1983) Vol. 258, No. 6, pp. 3895-3900. CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
FS BA
LA ENGLISH
AB New spin labeled derivatives of phosphorylcholine were synthesized. The compounds cause reversible inhibition of the precipitation reactions between pneumococcal C-polysaccharide and the **C-reactive proteins** from humans, dogfish sharks (Mustelus canis) and horseshoe crabs (Limulus polyphemus). The spin **labeled phosphorylcholine** derivatives also rival phosphorylcholine as a ligand for the human, dogfish and Limulus **C-reactive proteins**. The interactions of the purified **C-reactive proteins** with the spin labeled derivatives of phosphorylcholine were studied using ESR spectrometry. The dramatic decrease in the ESR signal of some of the spin labels is due to immobilization of the label. Only the well known phosphate spin label, 4-phosphate-2,2,6,6-tetramethyl-piperidine-1-oxyl could be used for binding studies on human and Limulus **C-reactive proteins**. Thus, by Scatchard analysis, the human **C-reactive protein** bound 1 mol of phosphate spin label per mol of protein with a Ka = 3.91 .times. 103 M-1; the Limulus **C-reactive protein** bound only 0.5 mol of phosphate spin label per mol of protein with an overall Ka = 1.95 .times. 103 M-1. Inhibition studies using purified C-polysaccharide-induced inhibition of the phosphate spin label-human **C-reactive protein** interaction showed competitive inhibition with a KI of 4.78 .times. 10-5 M at 18.degree. C. The phosphate spin label did not bind to dogfish **C-reactive protein**. One new phosphorylcholine spin label did bind and was used for Scatchard and Hill plot analyses. The dogfish **C-reactive protein**, which exists as a MW = 50,000 dimer, bound 2 mol of the phosphorylcholine spin label per mol of protein, and this binding exhibited negative cooperativity as indicated by a Hill coefficient of 0.75.
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Pathology - Inflammation and inflammatory disease 12508
Blood - Blood and lymph studies 15002
Temperature - General measurement and methods 23001
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IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Pathology; Physiology

IT Miscellaneous Descriptors
ESR
ORGN Classifier
Merostomata 75404
Super Taxa
Chelicerata; Arthropoda; Invertebrata; Animalia
Taxa Notes
Animals, Arthropods, Chelicerates, Invertebrates
ORGN Classifier
Chondrichthyes 85202
Super Taxa
Pisces; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Fish, Nonhuman Vertebrates, Vertebrates
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 107-73-3D (PHOSPHORYLCHOLINE)

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:455408 CAPLUS
DN 113:55408
ED Entered STN: 17 Aug 1990
TI Diagnostic compositions containing **labeled phosphorylcholine** and/or aminoethyl dihydrogen phosphate for detection and/or quantification of **C-reactive protein** in body fluids
IN Heggli, Dag Erik
PA Axis Research A/S, Norway
SO Brit. UK Pat. Appl., 8 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C07F009-02
ICS C07F009-09; C12N009-00; C12Q001-00
CC 9-5 (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 2217840	A1	19891101	GB 1988-9574	19880422
PRAI GB 1988-9574		19880422		

AB A diagnostic compn. for detection or detn. of **C-reactive protein** comprises phosphorylcholine (PC) or aminoethyl di-H phosphate (AEDP) chem. linked to an enzyme, a fluorescent agent, a radioactive substance, or a metal colloid particle (esp. Au or Ag). The protein binds to PC and AEDP.
ST **C reactive protein** diagnosis labeled conjugate; phosphorylcholine labeled **C reactive protein** assay; aminoethyl hydrogen phosphate **C reactive protein**
IT Diagnosis
(**C-reactive protein** detn. by labeled aminoethyl dihydrogen phosphate and phosphorylcholine for)
IT Fluorescent substances
Radioactive substances
(conjugates with aminoethyl dihydrogen phosphate and phosphorylcholine, in **C-reactive protein** detn.)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(C-reactive, detn. of, labeled aminoethyl dihydrogen phosphate and phosphorylcholine in)
IT Enzymes
RL: ANST (Analytical study)
(conjugates, with aminoethyl dihydrogen phosphate and phosphorylcholine, in **C-reactive protein** detn.)
IT 7440-22-4D, Silver, aminoethyl dihydrogen phosphate and phosphorylcholine conjugates 7440-57-5D, Gold, aminoethyl dihydrogen phosphate and phosphorylcholine conjugates
RL: ANST (Analytical study)
(colloids, in **C-reactive protein** detn.)
IT 107-73-3D, Phosphorylcholine, labeled conjugates 1071-23-4D, labeled conjugates
RL: ANST (Analytical study)
(in **C-reactive protein** detn.)

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:455408 CAPLUS
DN 113:55408
ED Entered STN: 17 Aug 1990
TI Diagnostic compositions containing **labeled phosphorylcholine** and/or aminoethyl dihydrogen phosphate for detection and/or quantification of **C-reactive protein** in body fluids
IN Heggli, Dag Erik
PA Axis Research A/S, Norway
SO Brit. UK Pat. Appl., 8 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C07F009-02
ICS C07F009-09; C12N009-00; C12Q001-00
CC 9-5 (Biochemical Methods)
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ST **C reactive protein** diagnosis labeled conjugate; phosphorylcholine labeled **C reactive protein** assay; aminoethyl hydrogen phosphate **C reactive protein**
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(**C-reactive protein** detn. by labeled aminoethyl dihydrogen phosphate and phosphorylcholine for)
IT Fluorescent substances
Radioactive substances
(conjugates with aminoethyl dihydrogen phosphate and phosphorylcholine, in **C-reactive protein** detn.)
IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(C-reactive, detn. of, labeled aminoethyl dihydrogen phosphate and phosphorylcholine in)
IT Enzymes
RL: ANST (Analytical study)
(conjugates, with aminoethyl dihydrogen phosphate and phosphorylcholine, in **C-reactive protein** detn.)
IT 7440-22-4D, Silver, aminoethyl dihydrogen phosphate and phosphorylcholine conjugates 7440-57-5D, Gold, aminoethyl dihydrogen phosphate and phosphorylcholine conjugates
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